Exhibit 300: Capital Asset Summary

Part I: Summary Information And Justification (All Capital Assets)

Section A: Overview & Summary Information

Date Investment First Submitted: 2009-06-30
Date of Last Change to Activities: 2012-06-29
Investment Auto Submission Date: 2012-02-28
Date of Last Investment Detail Update: 2012-06-29
Date of Last Exhibit 300A Update: 2012-08-16
Date of Last Revision: 2012-08-16

Agency: 006 - Department of Commerce **Bureau:** 48 - National Oceanic and Atmospheric Administration

Investment Part Code: 01

Investment Category: 00 - Agency Investments

1. Name of this Investment: NOAA/NESDIS/ GOES Ground System

2. Unique Investment Identifier (UII): 006-000320100

Section B: Investment Detail

1. **Provide a brief summary of the investment, including a brief description of the related benefit to the mission delivery and management support areas, and the primary beneficiary(ies) of the investment. Include an explanation of any dependencies between this investment and other investments.**

The Geostaionary Operational Environmental Satellite (GOES) ground System (GS) supports the NESDIS GOES mission. GEOES satellites provide data for short-term weather warnings and forecasts. Two GOES satellites provide images of the entire United States every 15 minutes or as frequently as every minute to monitor the development of severe weather. The National Weather Service (NWS) uses GOES data in models whose outputs form the basis of local weather forecasts. Over 120 NEWS Forecast Offices use GOES images to provide local weather forecasts and warnings of severe weather events. GOES images are coveted for use on all national television weather reports. GOES-GS is a "system of systems" that comprises the end-to-end framework for collecting, processing, and disseminating critical environmental data and information from the GOES satellites. GOES operational telecommunications and operational data processing elements are located at Fairbanks, AK, Wallops, VA, Suitland, VA, and Greenbelt, MD. GOES-GS is a mixed life cycle investment. It supports current, on-orbit, and planned satellite data gathering, processing, and distribution to all stakeholders.

2. **How does this investment close in part or in whole any identified performance gap in support of the mission delivery and management support areas? Include an**

assessment of the program impact if this investment isn't fully funded.

GOES-GS closes any performance gap related to being "unable to provide forecasting services and cannot meet customer requests for operational and situational (mended) forecasts". Therefore the United States and neighboring countries will be better prepared to identify the effects of hazardous weather conditions. If this investment is not fully funded, the data from the Geostationary Environmental Operational Satellites (GOES) cannot be downloaded, processed, and distributed. The data collected by the instruments on the GOES satellites are not made available to the stakeholders in the U.S. and people worldwide. IT refresh is required to maximize data processing capabilities and use of current satellite data.

3. **Provide a list of this investment's accomplishments in the prior year (PY), including projects or useful components/project segments completed, new functionality added, or operational efficiency achieved.**

FY11 activities - The rehosted GEMS-SPS (Sensor Processing System) was tested and is being transitioned to operational status. - Engineering support for EMOSS II and IT Security. - Common Analyst Work-Station (CAWS) Rehost to the GEMS technology was developed, installed, and tested. The GEMS-CAWS is expected to go operational in FY12. - The MDL (Multi-Use Data Link) Receive System and Server (MRS&S) refresh using Sparc based Netra servers from Oracle was developed, tested, installed, and transitioned to operations. Special security testing was performed on this rehosted MRS&S. - The Mykotronx command encryption replacement units were received and tested for compatibility with the original units. - The GOES-GS Backup was tested and transitioned to operational status. - Acquired Sun Netra servers to start the transition of the mission management command and telemetry COTS database servers - GOES-GS C&A completed and ATO Awarded for 1 year.

4. **Provide a list of planned accomplishments for current year (CY) and budget year (BY).**

FY12 planned accomplishments - Transition the GEMS-CAWS to operational status. - Upgrade the Cortex telemetry downlink and command control system. Upgrade from Windows-NT to Windows XP with plans to upgrade to Windows 7. - Build a prototype Windows 7 ground system client work station as a risk reduction activity in the GS IT refresh. This is a COTS based system which the currently only runs on Windows XP. - IT refresh of the central GS Telemetry Acquisition and Command Server (GTACS) to Sun Netra servers - Complete the future archtecture study. - Begin implementation of HSPD12 relaled upgrades. FY13 planned accomplishments - Construct and deploy Windows 7 based virtualized ground system workstations - IT refresh or replacement of the GOES Archive Server (GAS) which stores the historical GOES health and safety data for use by the satellite control engineers - IT refresh of the Orbit Attitude and Tracking System (OATS) from Windows XP to Windows 7 - IT refresh or replacement of the Secure Remote Access Server (SRAS) which is used to provide satellite engineers with current spacecraft health and safety data while they are not at the command and control facitility - Start the upgrade of the GS central COTS architecture from the present version (EPOCH 2) to the current vendor release (EPOCH 4) using virtualization on the GEMS architecture. This upgrade will be finished early in FY14 - Start the Refresh of the DADDS DCS System.

5. **Provide the date of the Charter establishing the required Integrated Program Team**

(IPT) for this investment. An IPT must always include, but is not limited to: a qualified fully-dedicated IT program manager, a contract specialist, an information technology specialist, a security specialist and a business process owner before OMB will approve this program investment budget. IT Program Manager, Business Process Owner and Contract Specialist must be Government Employees.

1997-04-07

Section C: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.C.1 Summary of Funding

	PY-1 & Prior	PY 2011	CY 2012	BY 2013
Planning Costs:	$0.6	$0.0	$0.0	$0.0
DME (Excluding Planning) Costs:	$12.7	$4.4	$4.7	$4.7
DME (Including Planning) Govt. FTEs:	$0.0	$0.0	$0.0	$0.0
Sub-Total DME (Including Govt. FTE):	$13.3	$4.4	$4.7	$4.7
O & M Costs:	$109.0	$17.8	$13.6	$13.6
O & M Govt. FTEs:	$0.0	$1.3	$1.3	$1.3
Sub-Total O & M Costs (Including Govt. FTE):	$109.0	$19.1	$14.9	$14.9
Total Cost (Including Govt. FTE):	$122.3	$23.5	$19.6	$19.6
Total Govt. FTE costs:	0	$1.3	$1.3	$1.3
# of FTE rep by costs:	0	7	7	7
Total change from prior year final President's Budget ($)		$23.5	$19.6	
Total change from prior year final President's Budget (%)		0.00%	0.00%	

2. If the funding levels have changed from the FY 2012 President's Budget request for PY or CY, briefly explain those changes:

The GOES-GS actual spending may change each year by a small amount due to inflation, planned hardware and software changes related to consolidating equipment into clusters to reduce stovepiping while, at the same time, implementing a phased technical refresh of old equipment and standardizing the system architecture. A consolidation and update of the IT security infrastructure is also included in the estimated spending. Note that GOES GS IT spending is equal to the GOES-GS budget line item.

Section D: Acquisition/Contract Strategy (All Capital Assets)

Table I.D.1 Contracts and Acquisition Strategy

Contract Type	EVM Required	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	IDV Agency ID	Solicitation ID	Ultimate Contract Value ($M)	Type	PBSA ?	Effective Date	Actual or Expected End Date
		NONE									

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:
For the GOES Ground System, the majority of contracts support steady state activities. For these contracts, there is a robust mechanism in place for contractor performance monitoring and control, applied through out the project life cycle. The projects under each contract are managed as an Integrated Project Team effort; interface working group and a technical interchange working group are in place to provide timely decisions to resolve issues which may arise. Contractor performance is evaluated by lead government team members on the Award Fee evaluation by the Board for award fee recommendation. Contractors are required to report cost and schedule detail including any risk assessment in monthly reports. These reports are tracked against project baselines to provide ongoing monitoring. For contracts supporting DME projects within the GOES Ground System that meet Department of Commerce's definition of a major developmental project, EVM will be levied.

Exhibit 300B: Performance Measurement Report

Section A: General Information

Date of Last Change to Activities: 2012-06-29

Section B: Project Execution Data

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost ($M)
3201D12001	Telemetry and Control Instruments	Provide tech analysis, identification of causes, mitigation, and solutions for performance issues, develop tech specs for new systems, study new tech for possible application to NESDIS systems.			
3201D12002	IT Refresh	Support IT refresh particularly compliance with configuration management and enterprise architecture guidelinesand standards.			
3201D12003	IT Security	GOES ground system compliance with IT security requirements including periodic recertifications.			

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities ($M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance ($M)	Cost Variance (%)	Total Planned Cost ($M)	Count of Activities
3201D12001	Telemetry and Control							

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities ($M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance ($M)	Cost Variance (%)	Total Planned Cost ($M)	Count of Activities
	Instruments							
3201D12002	IT Refresh							
3201D12003	IT Security							

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
NONE								

Section C: Operational Data

Table II.C.1 Performance Metrics

Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency
Image Navigation and Registration (INR)	Image registration radius in km at nadir for 3 sig	Customer Results - Service Quality	Under target	5.800000	6.000000	6.000000	6.000000	Monthly
Number of landmarks in spec as percent of total landmarks	Percent of total landmarks within spec that are id	Mission and Business Results - Services for Citizens	Over target	97.800000	98.000000	99.000000	98.000000	Monthly
Percent of data delivered meeting quality / time	Percent of data delivered that meets quality/timel	Process and Activities - Quality	Over target	98.000000	99.000000	99.920000	99.000000	Monthly
System availability	Percent of total satellite time available that the	Technology - Effectiveness	Over target	95.000000	98.000000	99.880000	98.000000	Monthly
GOES Ground System's technical efficiency is measured by what percentage of data downloaded daily by the GOES satellites is recovered and pre-processed by the GOES Ground System.	% of sat download recovered & processed	Technology - Efficiency	Over target	97.000000	98.000000	98.900000	99.000000	Monthly